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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/598,558

09/05/2006

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

CLARK, GREGORY D

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,558	<b>Applicant(s)</b> VULTO ET AL.	
	<b>Examiner</b> GREGORY CLARK	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-8 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 5 is objected to because of the following informalities: The amended claim do not include the structural formulae of the compounds as in the original claims. They should be included.
2. Also there is no indication on the amended claims that these formulae are to be removed. Claim 5 is not a complete sentence as required because it does not end in a period.

### ***Specification Objections***

3. The description of the drawings on page 5 needs the heading "Brief Description of the Drawings"

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-4 and 6-8 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the use of additives such as 4a,4b-Diphenyl-4a,4b,8a,8b-tetrahydro-diphenylene-1,4,5,8-tetraone (DTBT) (specification page 3), 2,7,8a,8b-tetraphenyl-4a,4b,8a,8b-tetrahydro-diphenylene-1,4,5,8-tetraone (TTBT) and 1,2,4,5 benzene tetra

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carboxylic dianhydride (BTCD) (specification page 4), it is not enabled for all compounds that function in this capacity.

The specification gives no recognition of how such materials electronically function in relation to the phenomena of initial drop in light emission prevention.

Likewise the specification does not reasonably provide enablement for the criteria needed to select DTBT, TTBT or BTCD over any carbonyl containing ring conjugated system.

Additionally, it is unknown as to whether any unconjugated ring system with pendant carbonyl moieties such as carboxylic acids, aldehydes, ketones and amides would function in the same capacity. There are a plethora of fused ring structures with internal or pendant carbonyl groups; however no guidance is given as to the function of the ring type, specific ring number, the presence or absence of alpha-beta unsaturation, or aromaticity in the additive classes to allow for appropriate selection.

The role that carbonyl groups play is not demonstrated in the claimed capacity in the prior art which focuses on a reduction in luminescence for materials such as PPV (arylene vinylene) caused by the presence of carbonyl groups (see Chemical Materials, 1994, 6, 1563-68).

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to reasonably selection functional additives for the invention commensurate in scope with these claims. Although there are a host of materials that meet the requirements of these claims, a tedious process of trial and error would be required to determine which additives would function in the claimed capacity since the scope of enablement is not clearly defined.

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This field is very unpredictable, while the problem solved by the applicants is known in the art, there is nothing in the art as a whole that give a indication as how to solve it. Given the lack of understanding on how to solve this problem, considerable guidance would be necessary to find other compounds that would function in the claimed capacity. The applicants have given little guidance and one would be relegated to trial and error as to what would work. This is clearly undue burden on the part of the public.

*Allowable Subject Matter*

5. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY CLARK whose telephone number is (571)270-7087. The examiner can normally be reached on M-Th 7:00 AM to 5 PM Alternating Fri 7:30 AM to 4 PM and Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/  
Supervisory Patent Examiner, Art Unit 1794

GREGORY CLARK/GDC/  
Examiner  
Art Unit 1794